

Chapter 5

Design and Development Standards

CHAPTER 5. DESIGN AND DEVELOPMENT STANDARDS

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5-1-2. General Description

This Chapter describes the design and development standards that apply to certain subdivisions. As described in Chapter 7, variances may be granted to allow deviations from the standards as specified in this Chapter.

5-1-3. Applicability

The following shall comply with this Chapter:

- (1) minor subdivisions;
- (2) major subdivisions;

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- (3) subsequent minor subdivisions;
- (4) amended subdivisions, when platted lots within a filed subdivision are further divided to create additional lots or when six (6) or more lots are redesigned; and
- (5) parcels where the property owner wants to remove an agricultural covenant required as a condition of using a subdivision exemption pursuant to 76-3-207(1)(c), MCA.

5-1-4. Findings

The Board of County Commissioners makes the following findings:

- (1) The County has the option of accepting a bond or other reasonable security for the completion of public infrastructure before or concurrent with the filing of the final plat. (See 76-3-507, MCA)
- (2) Excessive or inappropriate design and improvement standards add unnecessary cost to a development.
- (3) A mechanism is needed to ensure that all infrastructure necessary for a subdivision will be completed.

5-1-5. Purpose

The purpose of this Chapter is promote the public health, safety, and welfare and to:

- (1) minimize the negative effects of subdivisions on the general public and surrounding landowners;
- (2) establish minimum standards for the development of public and private roads, bridges, pedestrian ways, and access control to and from public roads.
- (3) require that the developer complete all infrastructure before filing the final plat and/or enter into an improvement agreement with the County

5-1-6. Responsibility for Improvements

All improvements required by this Chapter shall be designed, installed, and paid for by the developer, unless otherwise specified.

5-1-7. Certification of Completion

Prior to filing of the final plat, a the developer shall obtain written certification from a licensed professional engineer using the form(s) as may be used by the Road and Bridge Department, that the infrastructure required by this Code has been built and installed in accordance with this Code and acceptable construction practices (available in the Road and Bridge Department). The certification may be provided after filing the final plat when a bond or other security is provided in accordance with Sec 76-3-507 MCA.

5-1-8. General Design Principles

Subdivisions shall be designed to avoid adverse impacts. If avoidance of an adverse impact(s) is not possible, then that adverse impact(s) shall be minimized to an acceptable level and also mitigated in some manner. Adverse impacts on the following shall be considered:

- (1) agriculture, including: the agricultural sector, loss of important agricultural ground, and surrounding agricultural activities or practices;
- (2) agricultural water-user facilities;

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- (3) local services, including: public road system, police and fire protection, utilities, and public schools;
- (4) the natural environment, including: riparian/wetland areas, soil erosion, vegetation, and air pollution;
- (5) wildlife and wildlife habitat, including: fisheries and mammals; and
- (6) the public health and safety, including: police and fire protection, wildland fire hazard, traffic safety, and the presence of other known hazards such as high-pressure natural gas lines, airports, railroads, overhead power lines, industrial activities, irrigation ditches, and defined dam inundation areas.

5-1-9. Subdivision Name

(a) Names of New Subdivisions

When a parcel not within an existing subdivision is subdivided, the subdivider shall select a name for the subdivision that does not duplicate or too closely approximate in spelling or in sound the name of any other subdivision within Ravalli County. A list of subdivision names that have been used is available in the Clerk & Recorder's Office.

(a) Names of Subdivisions on Resubdivided Lots

When a lot(s) within an existing subdivision is further subdivided, the name of the subdivision shall remain the same as the parent subdivision and the lots shall be renumbered with a suffix or prefix as appropriate. (For example, when Lot 9 of Westridge subdivision is resubdivided into additional lots, then the lots would be designated as Lot 9-A, 9-B, and so on of Westridge Subdivision.) The Ravalli County Clerk and Recorder may waive this requirement for a major subdivision, if renaming the subdivision would cause less confusion.

ARTICLE 2. LOTS AND REMAINDERS

5-2-1. Specific Findings

The Board of County Commissioners makes the following findings:

- (1) A requirement that all remainders must be over 160 acres logically follows the definition of a subdivision as stated in the Montana Subdivision and Platting Act.
- (2) Perpetual road maintenance is needed on all roads that provide access to a subdivision to provide safe road conditions and to ensure public health, safety, and welfare. Currently, there is no formal mechanism for a subdivider to enter into an agreement with the Forest Service for road maintenance when the property accesses a Forest Service road. Furthermore, the County is not able to assume such road maintenance responsibility when it cannot meet its current maintenance responsibilities. As a consequence, it is not appropriate to approve of subdivisions on Forest Service roads when there is neither state or county maintenance.
- (3) Rivers and streams are an important resource in that they provide valuable fish and wildlife habitat and drain excess water from the land. However, they are sensitive to human caused alterations. Alteration of the bank and streamside vegetation can impair the ability of a stream to function properly. A no build/alteration zone will help to mitigate the negative impacts and protect the water quality and function of the stream. In addition, normal bank erosion and channel movement along the Bitterroot River will more likely than not, threaten homes that are placed too

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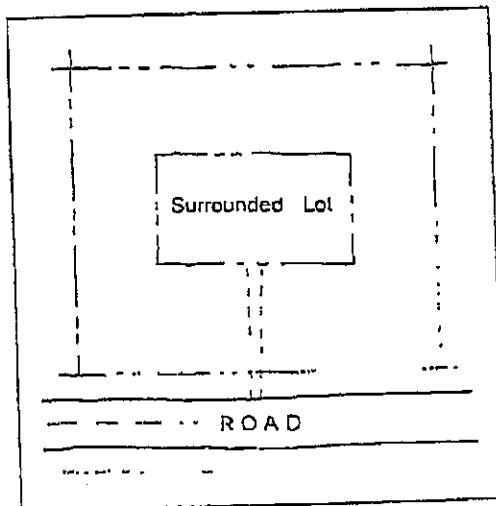
close to the river bank. The no-build/alteration zone will ensure that homes are not built too close to the river.

- (4) A public service utility operates a high-pressure natural gas line within the County. If the line were to rupture, it would represent a tangible threat to residences near the line. A requirement that keeps residences at least 25 feet from this gas line will reduce, but not remove, the threat from a major rupture in the gas line.

5-2-2. Lots

- (a) *Lot Design.* Lots shall conform to the following criteria:
- (1) No lot shall have an average depth greater than four (4) times its average width.
 - (2) No lot shall be divided by a municipal or county boundary.
 - (3) No lot shall be divided by a public road or right-of-way.
 - (4) Side lot lines shall be at substantially right angles to straight road lines and radial to curved road lines.
 - (5) No lot shall be surrounded by another single lot. (See Figure 5-2-1)

Figure 5-2-1.
Lot Surrounded by Another Lot.

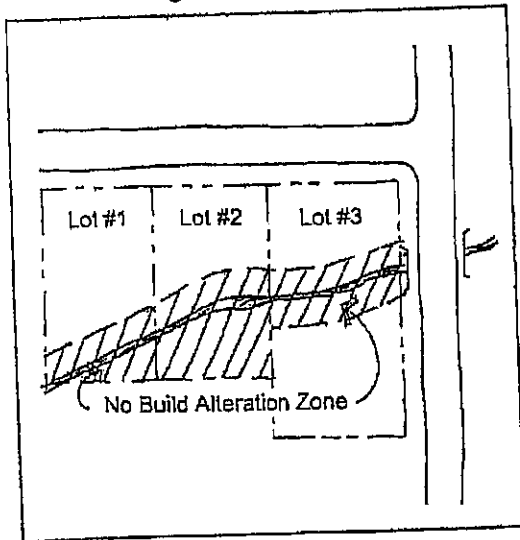


- (6) Whenever possible, a stream should not divide a lot, unless a no-build alteration zone is placed along the stream or both sides of the parcel have existing road access. (See Figure 5-2-2)

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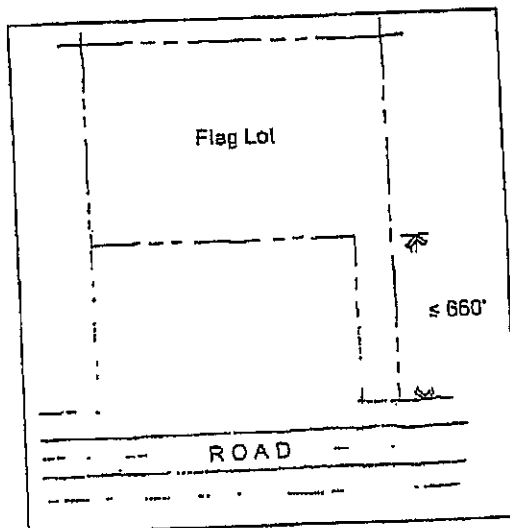
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Figure 5-2-2.
Lot Lines Along Streams.



- (7) The stem on flag lots (easements or fee-simple ownership) shall not exceed six hundred sixty (660) feet. (See Figure 5-2-3) Furthermore, flag lots shall not be used to avoid road construction.

Figure 5-2-3.
Flag Lot Requirements.



- (8) No lot shall be wholly located within the 100-year floodplain unless a permanent deed restriction is recorded with the Clerk and Recorder indicating that the parcel may only be used for agriculture or recreational purposes and that no building shall be constructed. (See 76-3-504(5), MCA)

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- (9) Lots shall be located on each side and around the perimeter of a cul-de-sac or hammerhead turnaround.
 - (10) No building site within a lot or access to the lot shall be subject to natural hazards.
 - (11) Slopes more than twenty-five (25) percent are unsuitable for building sites and shall be designated as a no build/alteration zone on the face of the final plat, unless a site design and building layout plan is submitted to address site constraints.
 - (12) As a general guideline, land within one hundred (100) feet of the ordinary high-water mark of streams shall be designated as a no build/alteration zone on the face of the final plat. This zone may be made wider or narrower depending on the particular circumstances(s) of the subdivision proposal and the stream. However, protection of the waterbody and the structures that will be built on the lots(s) should be of primary importance.
 - (13) Land within 25 feet of a high pressure gas line that is eight (8) inches or greater in diameter, shall be designated as a no-build zone on the face of the final plat, which only applies to residential dwellings, commercial and industrial structures.
- (b) **Lot Size.** Lot sizes shall conform to all of the following: (See 76-3-504(6)(a), MCA)
- (1) Each lot shall have an area sufficient to meet all design and development standards in this Code.
 - (2) Each lot shall have an area sufficient for a practical building site of at least 7,500 square feet that is accessible by a driveway. A lot not intended as a building lot, is allowed, provided the permitted use is designated on the face of the final plat and a permanent deed restriction is recorded with the Clerk and Recorder.
 - (3) When a proposed subdivision is located in a voluntary zoning district, it shall conform to the lot restrictions, if any, of that district.
 - (4) When a proposed subdivision is subject to existing covenants, deed restrictions, or any other restrictions filed in the records of the Clerk and Recorder's Office, it shall conform to the lot restrictions, if any.
 - (5) Relative to sanitation requirements, lot sizes shall conform to the standards of the Department of Environmental Quality (DEQ) as summarized in Table 5-2-1. In all circumstances, the standards of DEQ shall prevail.

Table 5-2-1.
Sanitation Guidelines.

Water Source	Sewage Disposal	Minimum Lot Area
Individual Well	Individual Septic	1 acre (43,560 square feet)
Public Water	Individual Septic	20,000 square feet
Individual Well	Public Sewer	20,000 square feet
Public Water	Public Sewer	None specified

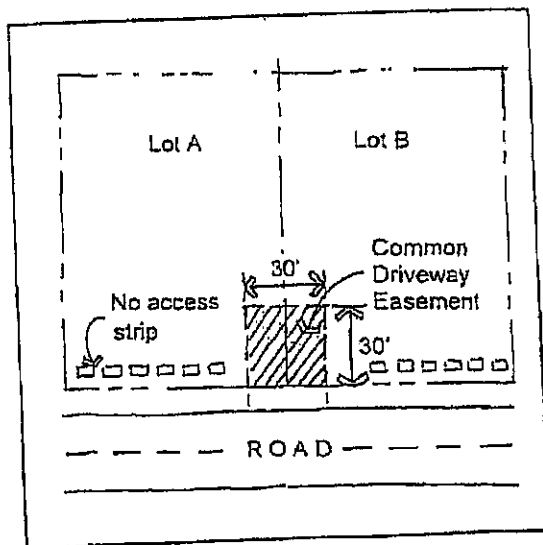
- (c) **Lot Access.** Access shall conform to the following criteria: (See 76-3-504(6)(a), MCA)
- (1) Each lot shall have legal access. (See 76-3-608(3)(d), MCA)
 - (2) Each lot shall have physical access according to the road design and development standards as required in this Chapter. (See 76-3-608(3)(d), MCA)

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- (3) A lot may not access a Forest Service road. A lot must access directly on to a road under the jurisdiction of a state, county or town, or on to a private road that accesses a road under the jurisdiction of the state, county or town.
- (4) When a lot fronts on more than one (1) public road, legal and physical access shall be provided on the road with the lowest functional classification and prohibited on the other road(s).
- (5) When two adjoining lots abut a major collector road or a higher classification road, a common driveway easement of thirty (30) feet by thirty (30) feet shall be located on the common boundary between the two lots and a no ingress/egress strip designated on the remainder of the lot frontages, except where the individual accesses (existing and proposed) for each of the lots could be more than six hundred (600) feet apart. (See Figure 5-2-4)
- (6) When a subdivision with more than two (2) lots fronts on a public road classified as a minor collector or higher, all lots within the subdivision shall access off of a road internal to the subdivision.

Figure 5-2-4.
Common Driveway Easement.



5-2-3. Remainders

- (1) The remainder parcel shall not be created for the purpose of transfer. (See: Attorney General Letter Opinion to Robert M. McCarthy, Esq., April 22, 1987)
- (2) The remainder parcel is not subject to survey requirements regardless of its size, unless it is to be transferred to another party at a later date. (See: Letter opinion from Attorney General Letter to Robert M. McCarthy, Esq., April 22, 1987 and also 76-3-401, MCA)
- (3) The subdivision may not create more than one (1) remainder parcel.
- (4) The remainder parcel shall exceed 160 acres unless the subdivider resides on the remainder parcel.

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- (5) Prior to a transfer of an unsurveyed remainder to another party, it shall be surveyed and the survey filed with the Clerk and Recorder, unless it can be described as a $\frac{1}{4}$ or larger aliquot parts of a United States government section or a United States government lot. (See 76-3-401, MCA)

ARTICLE 3. SANITATION

5-3-1. Water Supply and Wastewater Treatment Systems

Water supply and wastewater treatment systems shall meet the following minimum requirements:

- a. Regulations adopted by the DEQ under 76-4-104 for subdivisions that will create one or more parcels containing less than 20 acres; and
- b. Standards provided in 76-3-604 and 76-3-622 for subdivisions that will create one or more parcels containing 20 acres or more and less than 160 acres.

ARTICLE 4. TRANSPORTATION

5-4-1. Specific Findings

The Board of County Commissioners makes the following specific findings for this part:

- (1) Roads serve two competing functions: property access and efficient movement of goods and people.
- (2) When the number of accesses onto a high-traffic road increases, traffic efficiency declines and safety is jeopardized as depicted in Figure 5-4-1.
- (3) A well-developed and well-maintained road system is needed to provide proper access to property and efficient traffic circulation.
- (4) Roads are an important factor in community and subdivision design. Improperly designed roads and intersections can negatively affect the safety and efficiency of private and public roads. Furthermore, they can create unnecessary maintenance costs, limit a parcel's development potential, and limit a project's desirability.
- (5) Road standards should be designed to promote public health, safety and welfare.
- (6) Traffic control signs at high-traffic locations are needed to ensure efficient and safe vehicular and pedestrian movement.
- (7) Studies have shown that roads that do not intersect at about 90 degrees generally have higher accident rates than those that do.
- (8) The advantages of a single access point to a major residential project (greater sense of security and elimination of through-traffic) are generally outweighed by the advantages of multiple access points, which include reduced internal congestion and diffusion of the development's full traffic impact to the external public road system.
- (9) Cul-de-sacs represent a viable means of providing access to properties, provided the length does not become too long.
- (10) Traffic volume and the number of housing units should be two of the factors that determine the maximum length of a cul-de-sac.
- (11) Road intersections are points of conflict and a potential hazard. Road intersections should be designed to afford drivers complete and unobstructed view of approaching traffic to enable them to safely enter or cross the traffic flow.

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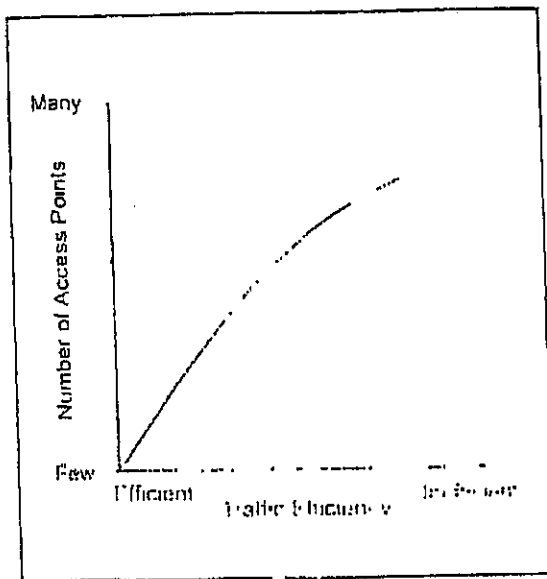
- (12) The primary use of road right-of-ways and easements is for the placement of roads. The placement of mail boxes and utilities and other uses are secondary purposes that must be compatible with the primary use.
- (13) Roads are critical to physical lot access and must be in place before filing of the final plat.

5-4-2. Purpose

The purpose of this Article is to:

- (1) Establish a hierarchy of road types with corresponding development standards.
- (2) Optimize efficient traffic movement.
- (3) Optimize traffic safety.
- (4) Ensure legal access to all parcels of land.
- (5) Minimize adverse environmental impacts from road development.
- (6) Create functional and attractive developments that will be an asset to the county.
- (7) Ensure that private roads do not negatively impact the efficiency or safety of public roads.
- (8) Reduce the number of conflict points between pedestrians and vehicles.
- (9) Ensure that all roads accommodate the requirements of emergency vehicles for ingress and egress.

Figure 5-4-1.
Relationship Between Access and Traffic Efficiency.



- (10) Establish standards to ensure adequate sight distances at road intersections so that motorists at an intersection can see approaching traffic and allow them to safely enter or cross the traffic flow.
- (11) Minimize the surface area of roads to reduce stormwater runoff and increase groundwater infiltration.
- (12) Minimize the number of accesses onto County and State roads to maintain traffic efficiency and safety.

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5-4-3. Road Classification

For the purpose of this Code, road types are established based on their location and predominant function within the County Roadway system. For definitions of the functional classifications, refer to the standards adopted by the Ravalli County Road and Bridge Department as listed below in Table A-I.

5-4-4. Road Layout Standards

- (a) *Topography.* Road grades shall conform as closely as possible to the original topography, provided they do not exceed the maximum grades as determined through the application of the adopted standards listed in Table A-I and as supplemented by Table B-1. Road cuts and fills should be kept to a minimum. "Side hilling" on slopes greater than 30 percent should be avoided.

Table A-I

The following have been adopted by Ravalli County:	
1	Specific provisions of Montana law, including the Montana Code Annotated and the Administrative Rules of Montana
2	The Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (2003 and updates);
3	Specific provisions of the Ravalli County Subdivision Regulations;
4	The American Association of State Highway and Transportation Officials (AASHTO) Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400) (2001 & updates);
5	The American Association of State Highway and Transportation Officials (AASHTO) Policy on Geometric Design of Highways and Streets (2001 & updates);
6	The Montana Public Works Standard Specifications, 5 th edition, (2003 & updates);
7	The American Association of State Highway and Transportation Officials (AASHTO) Guide for Design of Pavement Structures (1993 & updates).

- (b) *Avoidance of Environmentally Sensitive Areas.* Roads shall be laid out to avoid environmentally sensitive areas, such as wetlands, sensitive wildlife habitat, and prime farmland.
- (c) *Coordination with Surrounding Area.* Roads shall be properly related to adjoining land uses and special traffic generators such as business districts, schools, churches, population centers, and commercial centers.
- (d) *Connection to Adjoining Parcels.* Roads in a new development shall be connected to a right-of-way or easement in adjacent platted areas to allow for proper inter-neighborhood traffic flow. If adjacent lands are vacant or un-platted, the road right-of-way or easement shall be extended and the street developed to the property line of the adjacent parcel, where appropriate to allow for proper inter-neighborhood traffic flow.

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- (e) *River Crossings.* Where a road crosses a river or stream, the road shall intersect the river at right angles, except where impractical due to environmental damage, excessive construction costs, and other factors.
- (f) *Roads Along Adjoining Property.* Roads within the external boundaries of the subdivision which provide legal access to one or more subdivision units in the subdivision shall not be located along the perimeter of the subdivision without the expressed written consent of the adjoining property owner unless the road is hard-surfaced.
- (g) *Intersections.* Intersection locations and design shall conform to the standards outlined in Table A-I.
- (h) Table B-1 provides an overview of portions of the guidelines and standards contained in Table A-1 with additional requirements. Figure A-1 shows a typical road cross-section.

Table B-1: Specific Road Design Standards

	Rural Collector AASHTO "Green Book" ¹ Chapter 6	Local Road 400 + ADT AASHTO "Green Book" ¹ Chapter 5	Local Road³ 0 – 400 ADT AASHTO "Low Volume Guide" ²
Minimum Design Speed (MPH)	Per AASHTO	Per AASHTO	Per AASHTO
Minimum Paved Travel Surface	24 ft ⁴	22 ft ^{4,5}	18 ft ⁴
Minimum Gravel Shoulder	2 ft ⁶	2 ft ⁶	2 ft ⁶
Minimum R.O.W.	60 ft ⁷	60 ft ⁷	60 ft ^{7,8}
Maximum Grades ⁹	10% ⁹	10% ⁹	10% ⁹
Minimum Centerline Radius (ft)	Per AASHTO	Per AASHTO ¹⁰	Per AASHTO ¹⁰
Maximum Cul-De-Sac Length (ft)	Not Allowed	1400	1400

¹ "Green Book" refers to the latest edition of *A Policy on Geometric Design of Highways and Streets* published by the American Association of State Highway and Transportation Officials.

² "Low Volume Guide" refers to the latest edition of *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT<400)* published by the American Association of State Highway and Transportation Officials.

³ Specified standards in this table apply to the following local road classifications: rural major access, rural minor access, urban major access, and urban residential. For classifications: Industrial/Commercial Access, Agricultural Access, and Recreational and Scenic Roads, designs shall be per the AASHTO "Low Volume Guide."

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⁴ The minimum paved travel surface does not allow for parking on either side of the road. Additional road width is required to accommodate parking.

⁵ Twenty-two feet or per AASHTO, whichever is greater.

⁶ A total shoulder width on each side of the travel way shall be provided per AASHTO with a minimum two feet of gravel surfacing.

⁷ 60-foot minimum or greater if additional right-of-way width is required to accommodate the road cross-section elements.

⁸ All public roads and county roads shall have a minimum 60-foot right-of-way width. An 18-foot wide private road may have a 50 ft easement provided utilities and drainage is contained within the roadway easement or additional easement width is provided.

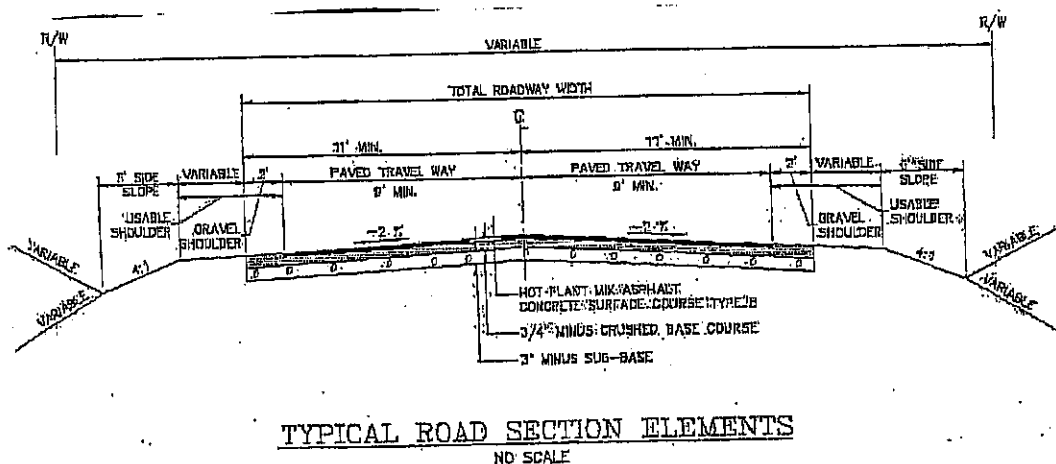
⁹ Grade specified in Table B-1 or AASHTO, whichever is lower.

¹⁰ For urban residential areas, a minimum centerline radius of 100 ft. may be used.

NOTES:

1. All road classifications above a Rural Collector should refer to the latest edition of *A Policy on Geometric Design of Highways and Streets* published by the American Association of State Highway and Transportation Officials.
2. Densities of 2 units per acre or higher are classified as urban areas and shall use the AASHTO guidelines for urban roads.

The following is a general schematic showing a typical cross-section



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5-4-5. Road Standards

- (a) All roads providing primary access to the subdivision shall meet or exceed the road standards as specified in Table A-I, with the exception of substandard County-maintained roads providing primary access to a subdivision with 20 or fewer units, which shall meet the requirements in Section 5-4-5(d).
- (1) For new construction, in no case will the total clear (unobstructed) travel surface be less than 22-feet in width, which may include a two-foot shoulder on each side of an 18-foot wide travel surface.
 - (2) For new and existing construction, all road rights-of-way and easement widths shall be a minimum of 60-feet.
 - (3) For new construction, road grades shall not exceed 10% maximum grade as specified in Table B-1.
 - (4) Roads through a subdivision which do not provide access to lots within the subdivision are exempt from these requirements.
- (b) *Paving.*
- (1) *Two units.* Roads serving two unit subdivisions are exempt from paving requirements for the first division. Second or subsequent minor subdivisions shall fall under the paving requirements for the number of lots within the entire subdivision that are created (i.e., the total number of units in the original subdivision plus the number of units in any subsequent subdivision of lots). All such roads shall meet the County's adopted standards for new construction as listed in Table A-I. No road within a subdivision of three or more units shall be considered under this subsection.
 - (2) *Three to five units.* All roads serving three to five units within the subdivision shall be hard surfaced and shall meet the County's adopted standards for new construction as listed in Table A-I.
 - (3) *Six to 20 units.* All roads serving six to 20 units within the subdivision shall be paved and meet the County's adopted standards for new construction as listed in Table A-I.
 - (4) *Twenty-one or more units.* All roads serving 21 or more units within the subdivision shall be paved and all plans shall be prepared by a licensed professional engineer who has provided evidence of coverage by a commercially reasonable policy of errors and omissions insurance of not less than \$1,000,000.00/occurrence limit. All subdivisions of 21 or more units shall acquire all proper easements, and all roads within and leading to the subdivision shall be brought to county standards for new construction from the nearest county standard road which meets the County standards for new construction over its length that lies on the primary access route to the subdivision.
- (c) *Standard County-Maintained Roads.* Roads within the County shall be considered standard if they have been legally adopted as a County road or have been identified as County-maintained roads, and meet or exceed the requirements in the County's adopted standards for existing construction over its relevant length as inspected and approved by the County Road Supervisor.
- (d) *Substandard County-Maintained Roads.* Where a subdivision is accessed by a substandard County-maintained road(s), the developer shall contribute to the County an amount equal to the pro-rata share of the improvements necessary to bring said road(s) up to County road standards as described in the County's adopted standards over its relevant length as listed in Table A-I. Pro

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rata funds will be deposited in an account for the road grader district in which the subdivision is located, and will be utilized only for road improvements on roads within that district. Road grader districts shall relate to defined geographic areas which will ensure that the use of the pro rata funds will benefit the developments which are the sources of the funds. If the County does not use the contribution within seven years, the County shall reimburse the developer upon the written request from the developer, provided that the request is received prior to use of the contribution.

- (e) *Substandard Roads not identified as County-Maintained Roads.* Where a subdivision is accessed by a substandard non-County-maintained road(s), the developer shall make all improvements that are necessary to bring that road(s) up to county road standards as defined in the County's adopted standards for new construction over its relevant length as listed in Table A-1.

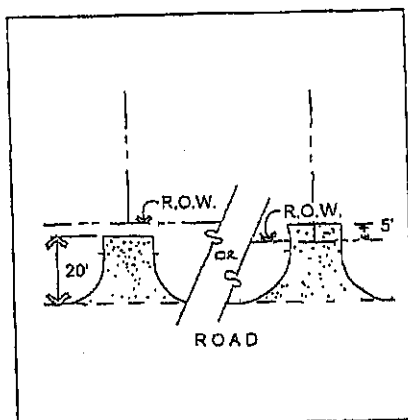
5-4-6. Intersection Visibility

- (a) *Generally.* To provide motorists with a clear view of intersection roads (public and private), sight distances shall be provided as listed in the adopted county standards in Table A-I for all road intersections and driveway intersections with roads.
- (b) *Measurement Criteria.* Visibility distances and measurements shall be in accordance with the county's adopted standards in Table A-I.

5-4-7. Common Driveways (See: 76-3-504(6)(a), MCA)

- (a) *Generally.* Where required by Section 5-2-2(c)(5), the developer shall, before filing of the final plat, install a common driveway within the common driveway easement.
- (b) *Size.* The driveway surface shall measure no more than eighteen (18) feet wide and shall extend from the existing road surface at least twenty (20) feet or to five (5) feet beyond the right-of-way line whichever is greater. The inside radius shall be fifteen (15) feet. (See: Figure 5-4-5)

Figure 5-4-5.
Common Driveway.



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5-4-8. Miscellaneous Improvements (See: 76-3-504(6)(a), MCA)

The following off-site and on-site improvements, or pro-rata share, as appropriate, shall be provided when needed to ensure traffic efficiency and traffic safety, including pedestrian safety:

- (1) acceleration, deceleration, and turning lanes,
- (2) school bus pull-off lanes,
- (3) frontage roads,
- (4) traffic control lights, and
- (5) other traffic improvements as appropriate.

5-4-9. Dedication of Roads (See: 76-3-504(6)(a), MCA)

- (a) *Generally.* All roads within a subdivision shall be considered a private road.
- (b) *Conditions for Acceptance of a Private Road as a Public Road.* The Board of County Commissioners may accept a private road within a subdivision, a private road that leads to a subdivision, or portion thereof as a county road consistent with Title 7, Chapter 14, Part 26, MCA.

5-4-10. Traffic Control Signs

Traffic control signs and intersection signalization shall be required when needed for traffic safety and efficiency as outlined in the county's adopted standards in Table A-I.

5-4-11. Road Name Signs (See: 76-3-504(6)(a), MCA)

- (a) *Number and Where Required.* At least one (1) road name sign shall be installed at all road intersections.
- (b) *Sign Uniformity.* The developer shall pay for and the County Road Department shall prepare and install all road name signs.
- (c) *Names.* Road names shall follow the guidelines as established by the County.

5-4-12. Right-of-Way, Easements, and Public Dedications

- (a) *Right-of-Way and Easement Width.* Rights-of way and easements shall be provided as specified in the County's adopted standards in Tables A-I and B-I.
- (b) *Use of Right-of way.* Rights-of-way and private road/public utility easements shall be used for roads, sidewalks, bike paths, and utilities, including, sanitary sewer, potable water, telephone wires, cable television wires, gas lines, or electrical transmission, and other public and private infrastructure. The placement of roads shall take precedent over all other uses.
- (c) *Cut Fill Easement.* Where a cut or fill area of a road is outside of the normal right-of-way or easement, a slope easement of sufficient width shall be required to allow maintenance of the cut or fill area.

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- (d) *Vacation of Right-of-Way.* Pursuant to Title 7, Chapter 14, Part 26, MCA, the Board of County Commissioners may, at its discretion, vacate a public right-of-way. At a minimum, the following conditions shall be met:
- (1) The request is consistent with State law.
 - (2) The right-of-way does not provide the only legal and physical access to any property.
 - (3) The vacation would not jeopardize the current or future location of any public utility.
 - (4) The proposed vacation is not detrimental to the public interest and provides a positive benefit to the County.
- (e) *Utility Easement.* When it can be reasonably anticipated that utility facilities in one development will be connected or extended to serve another development(s), a utility easement shall be so designated on the final plat.
- (f) *Public Dedications.* No right-of-way or other dedication of land to the public shall be made without the expressed written approval of the Board of County Commissioners.

ARTICLE 5. HIGH-FIRE HAZARD AREAS

5-5-1. Specific Findings

The Board of County Commissioners makes the following findings specifically related to this part:

- (1) Wildland fire events are common in the county.
- (2) The number of proposed land divisions and resulting homes in the forested areas of the county are increasing.
- (3) Homes in the forested areas of the county pose a special safety concern as a wildland fire can spread to a structure or from a structure to the forest.
- (4) Because of some past fire suppression efforts the intensity of wildland fires has been increasing which poses an increased risk to people, private property, and natural resources.
- (5) A comprehensive approach, which includes housing development design, fuels management, public education, and fire suppression efforts, is needed to adequately address wildland fire safety.
- (6) Special design and improvement standards are appropriate given the tangible threat the wildland fires pose to people, private property, and natural resources.
- (7) A "defensible space" around a structure created by vegetation reduction gives firefighters a better chance of protecting the structure and the forest.
- (8) A subdivider does not necessarily know where a home will be constructed on each lot, especially on larger lots. Therefore, it is reasonable to require the lot buyer to create the "defensible space" around the building site before the start of home construction.
- (9) In a wildfire event, well-constructed roads are needed to allow simultaneous access by emergency vehicles and escape by local residents.
- (10) Regardless of all possible efforts, it is not possible to guarantee protection of life or property in a wildland fire event.
- (11) Ravalli County does not impose building codes on structures and it would not be possible to control the type of roofing material or other construction materials in an effort to further reduce fire danger.

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5-5-2. Purpose

The purpose of this part is to adopt minimum standards to protect lives, property, natural resources, and scenic beauty and to assist fire suppression agencies.

5-5-3. Applicability

The requirements in this article only apply to those parcels that are located in a high-fire hazard area. Such determination is made on a case-by-case basis. It is understood that there may be actions taken by a developer to remove the parcel from a high-fire hazard status.

5-5-4. Wildland Fire Hazard Determination

If the Planning Staff determines the potential for a wildland fire hazard, a wildland fire hazard determination shall be done prior to the public hearing for the proposed subdivision. The determination of a proposed subdivision as a wildland fire hazard shall be made by a forester at the expense of the subdivider. If determined to be a wildland fire hazard, the proposed subdivision is subject to the conditions described in section 5-5-5 of this Code.

5-5-5. Special Design Standards

- (a) *Access.* Each lot shall have legal and physical access onto a public or private road that has at least two routes to outside of the high-fire hazard area. Where appropriate, one of the access routes can be considered as a secondary route provided it is:
 - (1) not used for normal access to the lots;
 - (2) properly signed as a secondary access route; and
 - (3) constructed to allow two-way traffic so fire equipment can move in and people move out.These roads should be coordinated with evacuation plans as may be prepared by the Ravalli County Department of Emergency Services.
- (b) *Site Design Considerations.* Open space, parkland, and recreation areas, including green belts and trails, should be used as a buffer between densely forested areas and the homesites.
- (c) *Building Site Limitations.* Building sites shall not be located on slopes more than twenty-five (25) percent or at the apex of a "fire chimney" (topographical features, usually drainageways or swales, which tend to funnel or otherwise concentrate fire toward the top of steep slopes.)
- (d) *Use Limitations on Lots.* No lot shall be used for commercial or industrial uses where people are employed or come as a matter of course, with the exception of home occupations.

5-5-6. Minimum Improvement Standards

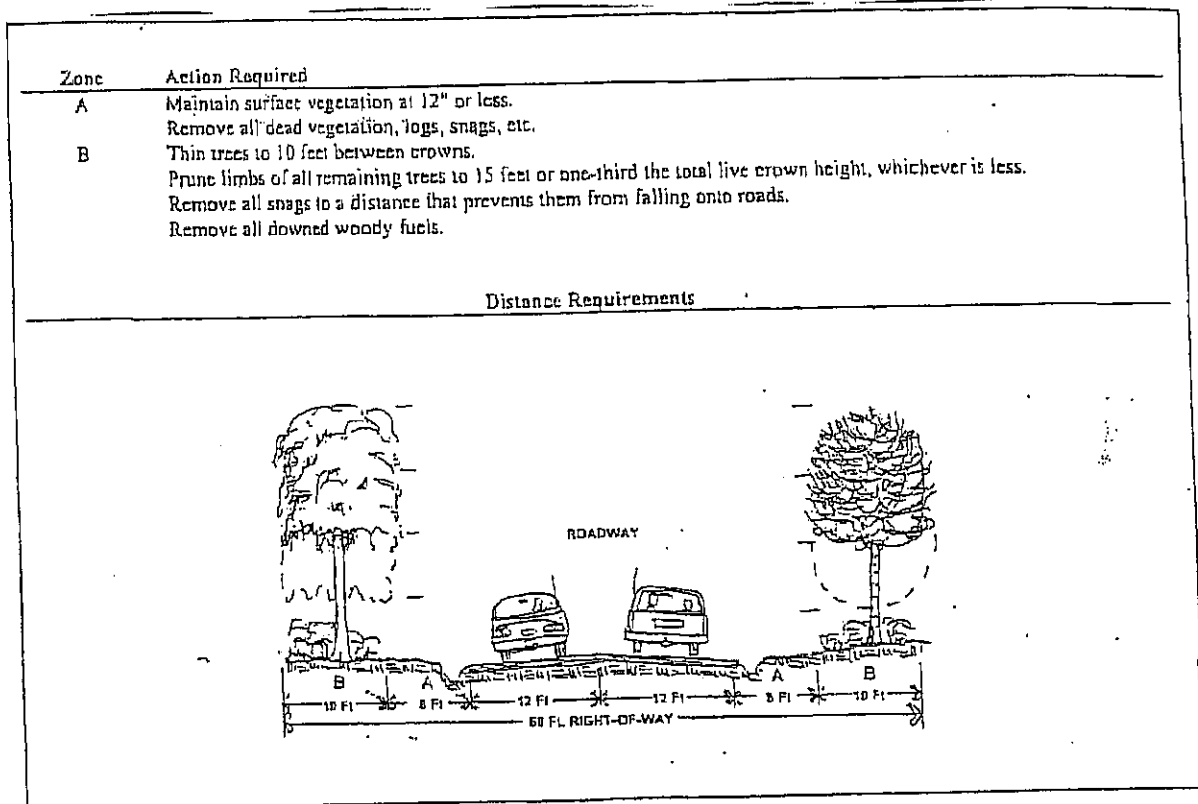
- (a) *Water Supply.* One of the following sources of water shall be provided for fire suppression:
 - (1) 1,000 gallons per minute flow from a municipal water system; or
 - (2) A water supply of at least 2,500 gallons for each lot. Said water supply shall be in close proximity to the lots, may be centrally located to serve multiple lots, and may consist of cisterns, reservoirs, ponds, or any combination thereof.

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- (b) *Vegetation Reduction Along Access Roads.* Prior to submitting a final plat for filing, vegetation reduction along access roads that pass through high fire-hazard areas shall be completed as described in Figure 5-5-1.
- (c) *Vegetation Reduction Around Principal Structures.* Covenants shall state that the property owner shall within three (3) months of occupancy complete the necessary vegetation reduction as described in Figure 5-5-2.
- (d) Other development standards should be incorporated as appropriate to minimize the tangible threats of wildland fire.

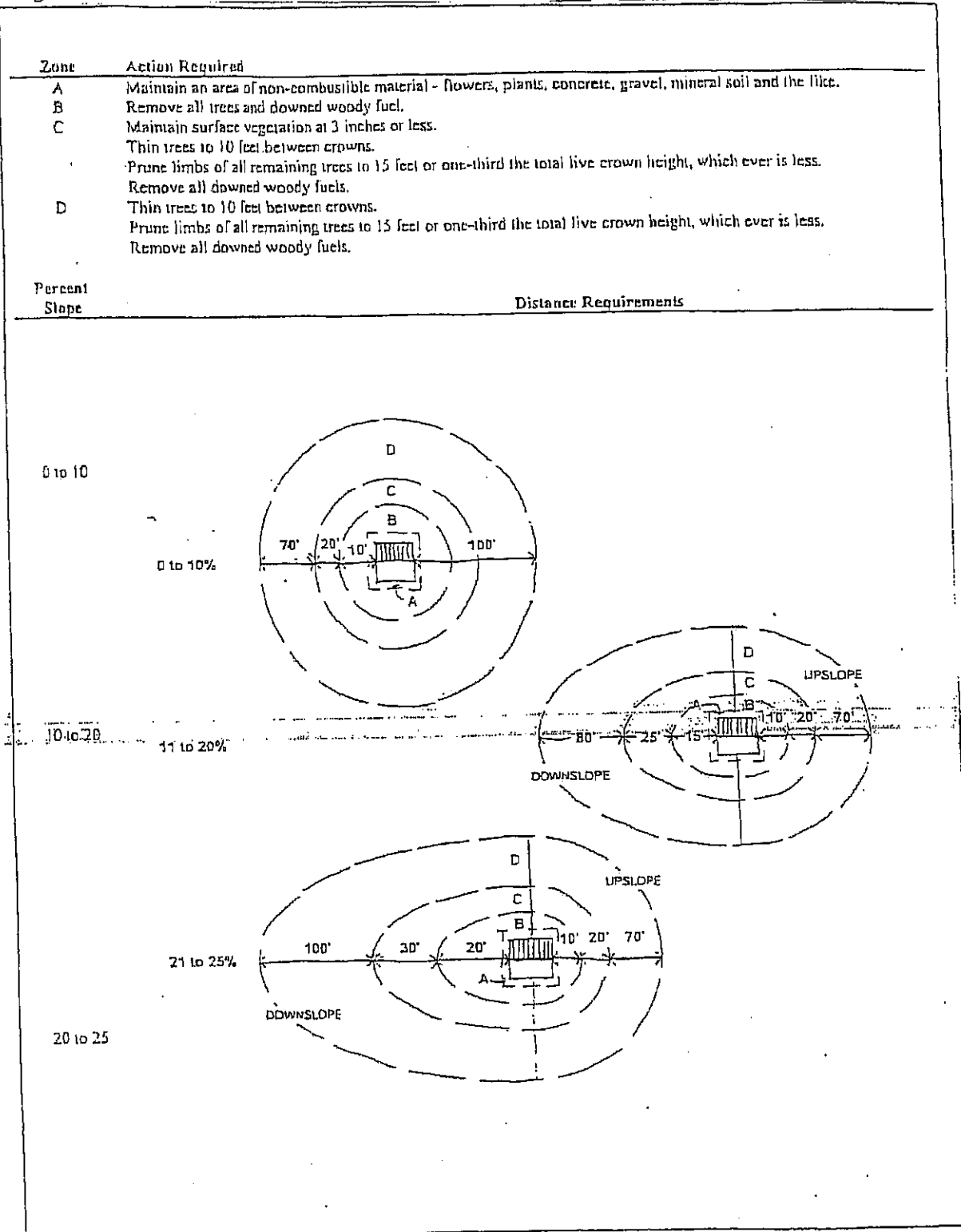
Figure 5-5-1
Fire Reduction Along Access Roads.



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Figure 5-5-2
Vegetation Reduction Standards for Principal Structures.



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ARTICLE 6. IRRIGATION WATER RIGHTS AND FACILITIES

5-6-1. Irrigation Easements

a. When water rights are appurtenant to the land on which a subdivision is proposed, the subdivider shall establish ditch easements in the subdivision that:

- i. Are in locations of appropriate topographic characteristics;
- ii. Are of sufficient width to allow the physical placement and unobstructed maintenance of open ditches or belowground pipelines for the delivery of water for irrigation to persons and lands legally entitled to the water under an appropriated water right or permit of an irrigation district or other private or public entity formed to provide for the use of the water right on the subdivision lots;
- iii. Are a sufficient distance from the centerline of the ditch to allow for construction, repair, maintenance, and inspection of the ditch; and
- iv. Prohibit the placement of structures or the planting of vegetation other than grass within the ditch easement without the written permission of the ditch owner.

b. Exceptions

The subdivider need not establish irrigation easements as provided above if:

- i. The average lot size is one (1) acre or less and the subdivider provides for disclosure, in a manner acceptable to the governing body, that adequately notifies potential buyers of lots that are classified as irrigated land and may continue to be assessed for irrigation water delivery even though the water may not be deliverable; or
 - ii. The water rights are removed or the process has been initiated to remove the water rights from the subdivided land through an appropriate legal or administrative process and if the removal or intended removal is denoted on the preliminary plat. If removal of water rights is not complete upon filing of the final plat, the subdivider shall provide written notification to prospective buyers of the intent to remove the water right and shall document that intent, when applicable, in agreements and legal documents for related sales transactions.
- c. The subdivider shall, unless otherwise provided for under separate written agreement or filed easement, file and record ditch easements for unobstructed use and maintenance of existing water delivery ditches, pipelines, and facilities in the subdivision that are necessary to convey water through the subdivision to lands adjacent to or beyond the subdivision boundaries in quantities and in a manner that are consistent with historic and legal rights;
- d. Disposition of Water Rights

When water rights are appurtenant to the land on which a subdivision is proposed, and the subdivision will create parcels with lot sizes averaging less than 5 acres, the subdivider shall:

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- i. Reserve all or a portion of the appropriation water rights owned by the owner of the land to be subdivided and transfer the water rights to a single entity for use by landowners within the subdivision who have a legal right to the water and reserve and sever any remaining surface water rights from the land;
- ii. If the land to be subdivided is subject to a contract or interest in a public or private entity formed to provide the use of a water right on the subdivision lots, establish a landowner's water use agreement administered through a single entity that specifies administration and the rights and responsibilities of landowners within the subdivision who have a legal right and access to the water;
- iii. Reserve and sever all surface water rights from the land;

5-6-2. Fencing of Irrigation Ditches

- (a) *When Required.* When an irrigation supply ditch abuts or traverses a subdivision, the subdivider shall install a fence(s) along the entire length of the ditch within the subdivision to provide an appropriate degree of safety. This requirement does not apply to lateral ditches or similar ditches off of these supply ditches or to those sections of a supply ditch that traverse through large parcels intended and suited for agricultural operations.
- (b) *Minimum Specifications.* The fence shall be at least 42 inches but no more than 48 inches high with a wire mesh fabric and posts and horizontal rails as appropriate. It shall be placed generally parallel to the ditch in a location as approved by the irrigation district/association in which it is located or as approved by the Board of County Commissioners if the ditch is not located in an irrigation district/association. The Board of County Commissioners may authorize an alternate design if it meets the intent of this section.

5-6-3. Irrigation Delivery System

When water rights are to be transferred to one (1) or more of the lots within a subdivision, an irrigation delivery system must be designed and installed. (Also see: Section 3-1-5 (a) (xxxviii))

ARTICLE 7. UTILITY STANDARDS

5-7-1. Electric and Telephone Service (See: 76-3-504(6)(d), MCA)

- (a) *Generally.* Service connections for electrical power and telephone shall be installed and located on each lot or located within an adjoining public utility right-of-way or easement.
- (b) *Requirements for Underground Utilities.* All electrical power lines, telephone lines, and cable television lines shall be placed underground when both of the following are possible:
 - (1) The lines could be placed underground without blasting, extensive use of jack hammers, or like efforts, and
 - (2) The cost/unit of underground installation does not exceed 1.5 times the cost/unit of overhead installation.

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- (c) *Utility Location.* Utility locations shall be approved by the appropriate utility company and the County when within a public easement or right-of-way. Any utilities installed under road pavement shall be stubbed clear of the road bed to prevent future disturbance of the road surface.
- (d) The subdivider shall show public utility easements in the subdivision, including necessary descriptions and dimensions, on the final plat in their true and correct location. The public utility easements must be of sufficient width to allow the physical placement and unobstructed maintenance of public utility facilities for the provision of public utility services within the subdivision.

5-7-2. Water Supply, Sewage Disposal and Solid Waste

- (a) *Generally.* Water supply, sewage disposal, and solid waste systems shall meet the minimum standards of the Montanan Department of Health and Environmental Sciences, as required by Title 76, Chapter 4, MCA, as amended, and all other applicable state and local regulations, (See: 76-3-504(6)(c), MCA). At a minimum, the method of solid waste disposal shall be specified during preliminary plat review.
- (b) *On-site dumps.* Any and all existing on-site dumps or solid waste disposal sites on a proposed subdivision shall be identified by the applicant and/or his agent, and evaluated by the appropriate state or local regulatory agency for potential environmental impacts.
- (c) *As-Built Drawing Required.* When a developer installs central water and/or central sewer facilities within or for the benefit of a subdivision, the developer shall submit as-built drawings to the appropriate utility provider for written approval.

5-7-3. Mail Service

Where mail delivery will not be provided to each individual lot, the subdivider shall provide an off-road area for central mail delivery within the subdivision.

5-7-4. Fire Protection

- (a) *Basic Fire Protection Required.* Each lot shall be located within a fire district.
- (b) *Fire Hydrants.* Every subdivision served by a municipal water system shall include a system of fire hydrants sufficient to provide adequate fire protection for the buildings intended to be within the subdivision. The municipality in consultation with the fire chief shall determine the number and location of the fire hydrants or waive this requirement in writing based on a written finding that the hydrants are not needed.

ARTICLE 8. GRADING AND STORM WATER DRAINAGE

5-8-1. General Requirements

- (a) *Generally.* The subdivider shall provide suitable storm water drainage facilities, including retention and detention structures. All surface runoff, in addition to that normally present before

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- the subdivision, shall be retained on site or released from the site in a manner which will not substantially increase the peak runoff normally present before subdivision.
- (b) *Design.* Subdivisions shall be designed to retain or detain storm water generated on the subject property. Grading and storm water drainage plans shall be submitted with the preliminary plat in conformance with Section 3-1-5 (a) (xxxix) (D). Final plans shall be submitted with the final plat. For those subdivisions requiring Montana Department of Environmental Quality (MDEQ) approval of the storm water drainage plans, the final plans submitted shall have been approved by MDEQ.
 - (c) *Minimum Standards.* All drainage systems shall meet the minimum standards of the Montana Department of Environmental Quality as required by MCA Title 76, Chapter 4, Part 1, as amended, and all applicable state and local regulations.
 - (d) *Installation of Storm Water Drainage Facilities.* Facilities for the collection of storm water runoff shall be installed prior to or concurrent with any other improvements and be designed to divert surface water away from cut faces or sloping surfaces of a fill. Facilities shall be installed with the grading and storm water drainage plan approved by MDEQ. In cases where MDEQ approval is not required, the facilities shall be installed in accordance with the grading and storm water drainage plan approved with the preliminary plat application. All storm water facilities shall be protected from erosion or silt deposition during construction of both public and private improvements.
 - (e) *Certification of Improvements.* All drainage structures installed shall be certified by a licensed professional.
 - (f) *Maintenance of Storm Water Drainage Facilities.* The subdivider is required to provide a mechanism for maintenance of storm water drainage facilities for a subdivision.
 - (g) *Natural Drainages.* Natural drainage ways shall be preserved except for necessary crossings in which the capacity of existing drainage ways shall be preserved. Drainage ways shall remain clear and open and shall not be obstructed with fences, structures, etc. Lots shall be arranged to preserve and maintain these drainage channels. Crossings shall be designed to preserve or enhance the capacity of the drainage while concurrently preserving native vegetation.

ARTICLE 9. NOXIOUS WEED CONTROL

5-9-1. General Requirements

When any action is taken within a subdivision that results in the potential for noxious weed invasion, the subdivider shall control the noxious weeds and revegetate the disturbed area(s) consistent with a weed control plan that has been approved by the Ravalli County Weed Board. (See: 7-22-2152, MCA)

ARTICLE 10. ADDITIONAL PROVISIONS FOR MOBILE HOME PARKS

5-10-1. Generally

In addition to the other design and improvements specified in this Chapter, mobile home parks shall comply with this part and the minimum requirements of the Montana Department Environmental Quality under the provisions of Title 50, Chapter 52, MCA, and all rules and regulations adopted pursuant thereto.

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5-10-2. General Requirements

- (a) *Retail Uses.* Retail uses intended specifically for the convenience and service of the residents of the mobile home park shall be designed and located in such a manner to discourage use by nonresidents of the mobile home park.
- (b) *Solid Waste.* An off-street area for the collection of solid waste shall be designated.
- (c) *Mail Delivery.* An off-street area for central mail delivery shall be designated.
- (d) *Storage.* An enclosed storage facility may be required within the mobile home park. In addition, an open area for storage or parking of boats, trailers, or other recreational vehicles belonging to residents of the mobile home park may be required.
- (e) *Street Lighting and Paving.* Street lighting and paving may be required as appropriate.
 - (1) Street lighting and paving shall be required for all newly created mobile home courts with a common interior road.
 - (2) Lighting is required for the solid waste disposal area.
- (f) *Screening.* Screening, such as fences or landscaping, along the property boundary line may be required to provide separation between adjoining land uses.

5-10-3. Mobile Home Lot

Mobile home lots shall comply with the following criteria:

- (1) Mobile home lots shall be arranged to permit the safe and practical placement and removal of mobile homes.
- (2) The limits of each mobile home lots shall be clearly marked on the ground by permanent flush stakes, markers or other suitable means. Location of lot limits on the ground must be approximately the same as shown on the acceptable plans. The degree of accuracy obtainable with an engineer's scale and a tape is acceptable. Precise engineering of lot limits is not required either on the plans or on the ground.
- (3) Mobile homes, including attached structures, such as awnings or carports, shall be located at least twenty-five (25) feet from any public road right-of-way or easement, fifteen (15) feet from other boundary lines of the park, ten (10) feet from the road that directly serves it, and twenty (20) feet from any other mobile home or its attached structures.
- (4) Detached structures, such as storage sheds shall be located at least twenty-five (25) feet from any public road right-of-way or easement, fifteen (15) feet from other boundary lines of the park, ten (10) feet from the road that directly serves it, and ten (10) feet from any other mobile home or its attached structures.
- (5) The size of the mobile home pad shall be suitable for the general market to be served and fit the dimension of the mobile homes anticipated.
- (6) The Board of County Commissioners may require that the mobile home stand be improved to provide adequate support for the placement and tie-down of the mobile home.
- (7) A mobile home pad may not occupy more than one-third (1/3) of the area of its lot area. The total area occupied by a mobile home and its roofed accessory buildings and structures may not exceed two-thirds (2/3) of the lot area.

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5-10-4. Streets and Parking Requirements

Streets and parking spaces shall comply with the following criteria:

- (1) A minimum of two (2) off-street parking spaces shall be provided for each mobile home lot. Parking may be in tandem. The driveway shall be located to allow for convenient access to the mobile home. The minimum width shall be ten (10) feet.
- (2) One (1) guest parking space for each ten (10) mobile home lots shall be provided. Group parking may be provided.
- (3) Streets shall be designated to permit safe placement and removal of mobile home units.
- (4) Roadways in a mobile home park shall not be dedicated to public use.
- (5) The entrance road(s) to mobile home park shall have direct connections to a public street and shall be designed to allow free movement of traffic on such adjacent public streets. No parking shall be permitted on the entrance road(s) for a distance of one hundred (100) feet from its point of beginning.

5-10-5. Miscellaneous Utilities

- (a) *Electrical.* Electrical system installation within a mobile home park shall be designed and constructed in accordance with the applicable codes and adopted by the authority having jurisdiction. Where the state or county does not assume jurisdiction, such installations shall be designed and constructed in accordance with the applicable provisions of the "National Electrical Code" (NFPA No. 70-1987).
- (b) *Natural Gas/Propane.* Gas equipment and installations shall be designed and constructed in accordance with the applicable codes adopted by the authority having jurisdiction. Where the state or county does not assume jurisdiction, such installation shall be designed and constructed in accordance with the appropriate provisions of the "National Fuel Gas Code" (NFPA No. 54-1981) and the "Standards for the Storage and Handling of Liquefied Petroleum Gases" (NFPA No. 58-1981). A readily accessible and identified shutoff valve controlling the flow of gas to the entire gas piping system shall be installed near to the point of connection of the liquefied petroleum gas container. Each mobile home lot shall have an accessible, listed gas shutoff valve installed. Such valve shall not be located under a mobile home. Whenever the mobile home lot outlet is not in use, the shutoff valve shall be plugged to prevent accidental discharge.

ARTICLE 11. ADDITIONAL PROVISIONS FOR RECREATIONAL VEHICLE PARKS

5-11-1. General Requirements

- (a) *Retail Uses.* Retail uses intended specifically for the convenience and service of the residents of the recreational vehicle home park shall be designed and located in such a manner to discourage use by nonoccupants.
- (b) *Solid Waste.* An off-street area for the collection of solid waste shall be designated.
- (c) *Screening.* Screening, such as fences or landscaping, along the property boundary line may be required to provide separation between adjoining land uses.
- (d) *Setbacks.* Mobile homes, including attached structures, such as awnings or carports, shall be located at least twenty-five (25) feet from any public road right-of-way or easement, fifteen (15) feet from other boundary lines of the park, ten (10) feet from the road that directly serves it, and twenty (20) feet from any other mobile home or its attached structures.

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- (e) *Lot Design.* Recreational vehicle lots shall be arranged to facilitate placement and removal of vehicles from individual lots.